



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/001,871	11/19/2001	Stephen M. Douglass	X-919 US	3401

24309 7590 08/10/2004

XILINX, INC  
ATTN: LEGAL DEPARTMENT  
2100 LOGIC DR  
SAN JOSE, CA 95124

EXAMINER

KIM, KENNETH S

ART UNIT PAPER NUMBER

2111

DATE MAILED: 08/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/001,871

Applicant(s)

DOUGLASS ET AL.

Examiner

Kenneth S KIM

Art Unit

2111

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

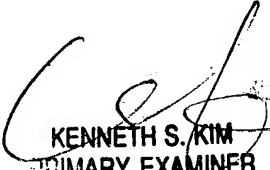
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 06 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 23-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-10, 23, 24 and 26-31 is/are rejected.
- 7) ☒ Claim(s) 3 and 25 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

  
KENNETH S. KIM  
PRIMARY EXAMINER

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**BEST AVAILABLE COPY**

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/25/02, 4/15/02, 1/20/04
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

1. Claims 1-10 and 23-31 have been elected for examination, and claims 11-22 and 32-43 have been canceled. .

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-, 2, 4-10, 23, 24, and 26-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Trimberger, U.S. Patent No. 5,752,035, submitted by the applicant.

Trimberger teaches the invention as claimed in claim 1 including a method for processing data within a programmable gate array, the method comprises:

(a) detecting, by a fixed logic processor (20) embedded within the programmable gate array, a custom operational code (col. 4, line 57),

(b) providing, by the fixed logic processor, an indication of the custom operational code to the programmable gate array in response to detecting the custom operational code (114; col. 10, line 11),

Art Unit: 2111

(c) performing by at least a portion of the programmable routine (col. 6, line 29) in response to receiving the indication of the custom operational code (col. 6, line 28; col. 10, line 37), and

further teaches as in claims 2 and 4-10,

(d) detecting the custom operational code in an algorithm that includes a series of instructions from a standard instruction set corresponds to an architecture of the fixed logic processor (col. 9, line 64) and providing to programmable gate arrays (col. 10, line 11) via an auxiliary processing interface of the fixed logic processor (114) – claims 2 and 4,

(e) generating a result and providing upon receiving a request in response to a data ready indication by the at least a portion of the programmable gate array to the fixed logic processor (col. 10, line 37) – claims 5 and 6,

(f) pre-configuring the at least a portion of the programmable gate array to perform the fixed logic routine (col. 4, line 25) and configuring a second portion of the programmable gate array as a second co-processor in response to receiving the indication of a second custom operational code (col. 12, line 50) and performing respective routine – claims 7-10.

The apparatus claims 23, 24, and 26-31 are equivalently rejected based on the same reason.

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

**BEST AVAILABLE COPY**

Art Unit: 2111

Klingman taught a method of adapting standard microprocessor architecture via an interface to a configurable subsystem.

Borland taught a method of using programmable logic to extend functions.

5. Claims 3 and 25 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The claims are allowable for the teachings of prior art do not teach the providing of first and second processing instructions, first and second interrupt instructions, and a system management instruction to the portion of programmable gate array.

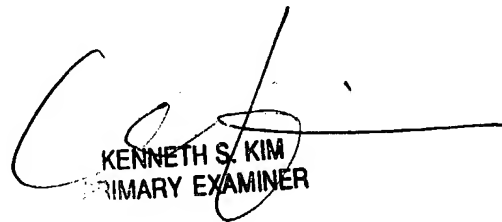
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth S KIM whose telephone number is (703) 305-9693. The examiner can normally be reached on M-F (8:30-17:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on (703) 305-4815. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

\*\*\*

August 5, 2004

  
KENNETH S. KIM  
PRIMARY EXAMINER

BEST AVAILABLE COPY